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EXAMINER

DINH, TIEN QUANG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3644

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/782,941

Applicant(s)

ROCK, EUGENE F.

Examiner

Tien Dinh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,8,10,14-16,21,22 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,8,10,14-16,21,22 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 10, 14-16, and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood what is meant by “substantially the same.” The specification fails to disclose what substantially the same mean. Furthermore, the drawings clearly show that the rotors have the same diameter. Please explain.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 14, 21, and 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Apostolescu.

Apostolescu discloses a helicopter having a coaxial rotor set having a first rotor carried by a first shaft, a second rotor carried by a second shaft, the first rotor has cyclic pitch control (to

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control pitch and roll) while the second rotor does not (see column 2, lines 29-36). The first and second rotors have “substantially the same diameters.”

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 8, 10, 14, 16, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweden (172,026) in view of Leon.

Sweden discloses a helicopter having a coaxial rotor set having a first rotor carried by a first shaft, a second rotor carried by a second shaft, the first rotor (lower one in figure 4) has cyclic pitch control (to control pitch and roll) while the second rotor does not. Sweden is silent on the rotors being teeterable. However, Leon discloses that rotors being teeterable are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have made Sweden's rotors teeterable as taught by Leon to make the aircraft more maneuverable.

Claims 2, 3, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweden as modified by Leon as applied to claim 1 above, and further in view of German '795.

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Sweden as modified by Leon discloses all claimed parts except for the use of an airfoil/yaw paddle disposed in a downwash from the rotor set to control yaw. However, German '795 discloses that yaw paddles are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used yaw paddles in Sweden's system as modified by Leon and as taught by German '795 to create greater yaw control.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sweden as modified by Leon as applied to claim 1 above, and further in view of Munski.

Sweden as modified by Leon discloses all claimed parts except for the use of a reversible blade pitch tail rotor. However, Munski discloses that reversible blade pitch tail rotors are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used a reversible blade pitch tail rotor in Sweden's system as taught by Munski to create greater yaw control.

Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostulescu in view of Sweden (172,026).

Apostulescu discloses all claimed parts except for the lower rotor having cyclic blade pitch control linkages. However, Sweden discloses that lower rotors having cyclic blade pitch control linkages are well known in the art.

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It would have been obvious to one skilled in the art at the time the invention was made to have made the lower rotor have the cyclic blade pitch control linkage in Apostulescu's system as taught by Sweden to increase maneuverability.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apostulescu in view of German '795.

Apostulescu discloses all claimed parts except for the use of an airfoil/yaw paddle disposed in a downwash from the rotor set to control yaw. However, German '795 discloses that yaw paddles are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used yaw paddles in Apostulescu's system as taught by German '795 to create greater yaw control.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apostulescu in view of Munski.

Apostulescu discloses all claimed parts except for the use of a reversible blade pitch tail rotor. However, Munski discloses that reversible blade pitch tail rotors are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used a reversible blade pitch tail rotor in Apostulescu's system as taught by Munski to create greater yaw control.

***Response to Arguments***

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The Examiner has read the applicant's arguments on the term "substantially" and can not find in the disclosure what is meant by "substantially the same." The applicant has not revealed that the upper and lower rotors have diameters that vary from each other by no more than 10%.

The Examiner has introduced new arts to reject the claims therefore, the applicants arguments are moot.

As for the applicant's arguments on the Apostolescu reference, please note that the Examiner broadly interpret the diameters of the rotors in his system as "substantially the same" since they are "closely" the same in length.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 703-308-2789. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4195.

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*True*